

## Appendix 3

# Theater Joint Trauma Record

### General

Evidence-based medicine has become the goal of all specialties. Unfortunately, because of the realities of Combat Trauma, timely and accurate data collection and interpretation of results are difficult. Quality information on casualties for combatant commanders is essential because it facilitates optimal placement, utilization, and resupply of scarce medical resources, and rapid identification of new trends in wounding and treatment. Accurate, aggregated theater information is necessary to shorten quality improvement cycles in deployed treatment facilities.

Furthermore, these data placed on a website could provide rapid feedback to the sending physicians, allowing individual follow-up on their patients. These concepts are not new: they are routinely employed in the > 1,000 verified trauma centers in the US. Application of these principles to the battlefield, using a limited set of jointly approved data elements is described below. This data collection effort is not designed to be an extra step. The proposed form can be used as the trauma chart (both battle and nonbattle injury) and sent to the next evacuation Level with the casualty.

### Situational Awareness

The revolution in warfighting which has digitized the battlefield to display friendly positions, intelligence, and engagements electronically has not been equally applied to the casualty side of the equation. This places demands on medical organizations to provide online and continuously updated status and location information on killed, wounded, ill, and psychologically impaired combatants and noncombatants; which includes both the casualty loss to the unit and the return to duty patient. This

need will only escalate, as medical situational awareness plays an increasing role in the tactical risk assessment process. At a minimum, commanders should be able to assess Killed In Action (KIA, died before reaching medical care/force wounded) and Died Of Wounds (DOW, die after reaching medical care/force wounded) in order to measure risk associated with operations and the capability of the medical force to control mortality.

$$\text{Percentage KIA} = \frac{\text{No. killed before reaching a BAS}}{\text{No. of casualties (killed + admitted)}} \bullet 100$$

$$\text{Percentage DOW} = \frac{\text{No. died after reaching a BAS}}{\text{No. of admitted}} \bullet 100$$

Where admitted is defined as any casualty that stays at a Level II facility or above. These definitions do not include the carded for record category in the denominator

A breakdown of casualties by type of injury and the major body regions (ie, face, head and neck, chest, abdomen and pelvis, upper and lower extremities, and skin) will enable an analysis of injury patterns that can be utilized to design interventions resulting in a decrease in morbidity and mortality.

### **Other Uses**

Data on types of wounds, their causes, and appropriate procedures have potential value in constructing predictive models for medical force development and placement, logistical delivery systems, and research on improved medical interventions. The history of improvements in medicine and surgery are grounded on the battlefield, and dissemination should not be limited to the isolated innovator with a personal spreadsheet for documentation. Individual providers at individual medical treatment facilities (MTFs) have long recorded clinical data and observations. This Joint Theater Trauma Record effort is an extension of their efforts.

### **Minimum Essential Data**

In addition to recording the standard contents of the postprocedure note (ie, who did what, on whom, why, and a plan), the standard data components of a trauma registry are especially helpful (eg, demographics, circumstance and mechanism of injury, pre-hospital monitoring and care, hospital monitoring and care, outcome, participants, direct assessment against standards). Figure A-1 (see next four pages) is a sample form that can serve as both the trauma chart and the data entry source. These minimum essential elements have been agreed on by the US Army, Air Force and Navy. Data will be collated and placed on a website at the first Level IV facility in the evacuation chain.

### **Recommended Methods and Technology**

The process to document emergency trauma care can be employed on either the immature or mature battlefield. This would entail utilizing paper or computer-assisted electronic technology, respectively. In the ideal environment, this would be a single step process. Reality is much different. It is important to recognize that documentation should occur at all Levels, while aggregation of data should occur at the first Level that can support such activity. At a minimum, paper documentation should be used for each casualty and the chart should accompany the patient to the rear as evacuation occurs. When electronic records are available, this process will be simplified.

Trauma Record				
DISCHARGE SUMMARY				
MEDICATIONS:	LABS:	XRAYS:	PMH: Allergies:	
REGION	DIAGNOSIS, PROCEDURES and COMPLICATIONS			
Face				
Head & Neck (incl C-spine)				
Chest (incl T-spine)				
Abdomen (incl L-spine)				
Pelvis				

UPPER /LOWER Extremities			
Skin			
DISPOSITION	<input type="checkbox"/> EVAC to <input type="checkbox"/> RTD <input type="checkbox"/> DECEASED (see below)	Evacuation Priority	<input type="checkbox"/> ROUTINE <input type="checkbox"/> PRIORITY <input type="checkbox"/> URGENT
DTG:			
Damage Control Procedures? Y / N		Hypothermic (< 34°C)? Y / N	Coagulopathy? Y / N
Cause of Death at _____:			
ANATOMIC:			
<input type="checkbox"/> Airway <input type="checkbox"/> Head <input type="checkbox"/> Neck <input type="checkbox"/> Chest <input type="checkbox"/> Abdomen <input type="checkbox"/> Pelvis <input type="checkbox"/> Extremity (Upper/Lower) <input type="checkbox"/> Other			
PHYSIOLOGIC:			
<input type="checkbox"/> Breathing <input type="checkbox"/> CNS <input type="checkbox"/> Hemorrhage <input type="checkbox"/> Total Body Disruption <input type="checkbox"/> Sepsis <input type="checkbox"/> Multi-organ failure			
COMMENTS:		SURGEON: _____ (printedName)	

<b>Trauma Record</b> For use of this form, see DoD Memo Subject: Trauma Record, dtd 1 APR 04, the proponent agency is OTSG									
<b>AUTHORITY:</b> AR 40-66 <b>PURPOSE:</b> To provide a standard means of documenting all trauma care at echelons 1-3 <b>ROUTINE USES:</b> The "Blanket Routine Uses" set forth at the beginning of the Army compilation of systems of records notice apply. <b>DISCLOSURE:</b> This is protected health information. HIPAA laws apply									
<b>MTF DESIGNATION:</b> Number		<b>CASUALTY NAME:</b> FIRST LAST		<b>CASUALTY SSN:</b> - -					
<b>Arrive Date-Time Group (DTG):</b>		<b>Rank</b>		<b>Date of Birth</b>		<b>Gender</b> <input type="checkbox"/> Male <input type="checkbox"/> Female		<b>Unit</b>	
<b>ARRIVAL METHOD:</b> <input type="checkbox"/> WALKED <input type="checkbox"/> Non-MED GND <input type="checkbox"/> CARRIED <input type="checkbox"/> SHIP EVAC <input type="checkbox"/> Non-MED AIR <input type="checkbox"/> GND AMB <input type="checkbox"/> OTHER <input type="checkbox"/> AIR AMB		<b>Nation</b> <input type="checkbox"/> US <input type="checkbox"/> Host Nation <input type="checkbox"/> Enemy( ) <input type="checkbox"/> Coalition( )		<b>Service</b> <input type="checkbox"/> Civilian <input type="checkbox"/> USN <input type="checkbox"/> NGO ( ) <input type="checkbox"/> Combatant <input type="checkbox"/> USMC <input type="checkbox"/> Other <input type="checkbox"/> Contractor <input type="checkbox"/> USAF <input type="checkbox"/> USA <input type="checkbox"/> SOF					
<b>Wound DTG:</b>		<b>PROTECTION:</b> <input type="checkbox"/> UNK		<b>Not Worn</b>		<b>Struck</b>		<b>Penetrated</b>	
<b>WOUNDED BY:</b> <input type="checkbox"/> US/COALITION(Nation ) <input type="checkbox"/> ENEMY <input type="checkbox"/> NonENEMY <input type="checkbox"/> CIVILIAN (Nation ) <input type="checkbox"/> TRAINING <input type="checkbox"/> SELF ACCIDENT <input type="checkbox"/> SELF NON-ACCIDENT <input type="checkbox"/> SPORTS-RECREATION <input type="checkbox"/> OTHER:		<b>HELMET</b> <b>FLAK VEST</b> <b>CERAMIC PLATE</b> <b>EYE PROTECTION</b> <b>OTHER:</b>		<b>Not Worn</b>		<b>Struck</b>		<b>Penetrated</b>	
<b>MECHANISM OF INJURY:</b> <input type="checkbox"/> GSW/BULLET <input type="checkbox"/> BLUNT TRAUMA <input type="checkbox"/> SINGLE FRAGMENT <input type="checkbox"/> MULTI FRAGMENT		<input type="checkbox"/> KNIFE / EDGE <input type="checkbox"/> BLAST <input type="checkbox"/> CRASH(a/c, veh, pos) <input type="checkbox"/> Chem/Rad/Nud <input type="checkbox"/> BURN (thermal, flash)		<input type="checkbox"/> CRUSH <input type="checkbox"/> FALL <input type="checkbox"/> SMOKE Inhalation <input type="checkbox"/> HEAT <input type="checkbox"/> COLD		<input type="checkbox"/> BITE / STING <input type="checkbox"/> OTHER			
						<b>GLASGOW COMA SCALE (circle one)</b> 3 8 12 15			
						<b>TRIAGE CATEGORY:</b> <input type="checkbox"/> IMMEDIATE <input type="checkbox"/> MINIMAL <input type="checkbox"/> DELAYED <input type="checkbox"/> EXPECTANT			
						<b>UNC STUPOR LETHARGY ALERT</b>			
						<b>TIME</b>			
						<b>Pulse</b>			
						<b>Temp</b>			
						<b>B/P</b>			
						<b>Resp</b>			
						<b>SpO<sub>2</sub></b>			

TX & PROCEDURES:	
SEDATED	
CHEM	
PARALYZED	
INTUBATED	
CRIC	
NEEDLE	
DECOMP	
Chest Tube	L R air/blood
IO line	
COLLOID	ml
CRYSTALLOID	LR/NS/HTS ml
TOURNIQUET	Time on Time off
Collar / C-spine	
Back board	
HEMOSTATIC	
DEVICE	
OXYGEN	Liters/min
RBC	Units
FFP	Units
CRYO	Units
Pits	Packs
Fresh Whole Bld	Units
rFVIIa	mcg/kg
EXT Fix /splint	Extremity

INJURY Description (Location, nature and size in cm)

AM Amputation	BL Bleeding	D Deformity	H Hematoma
AV Avulsion	B Burn	F Foreign Body	L Laceration
P Puncture	X Fracture	S Stab Wnd	G Gunsh Wnd
OR Start	Vent On	ICU in	
Stop	Off	Out	
PROVIDER	SPECIALTY:		

